



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/164,206	09/30/1998	CARL J. DISTER	98RE155	6382

7590 12/22/2003

ALLEN BRADLEY COMPANY INC
JOHN J HORN
PATENT DEPT 704P FLOOR 8 T 29
1201 SOUTH SECOND STREET
MILWAUKEE, WI 53204

EXAMINER

MILLER, CRAIG S

ART UNIT	PAPER NUMBER
----------	--------------

2857

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER OF PATENTS AND
TRADEMARKS
Washington, D.C. 20231

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Paper No. 17

Serial Number: 09/164,206
Filing Date: September 30, 1998
Appellant: Carl J. Dister

MAILED

DEC 22 2003

Himanshu S. Amin
For Appellant

GROUP 2000

EXAMINER'S ANSWER

This is in response to Appellant's brief on appeal filed 09 October 2003.

(1) Party in Interest

The statement of the Party in Interest contained in the brief is correct.

(2) Related Appeals and Interferences

The statement of Related Appeals and Interferences contained in the brief is correct.

(3) Status of Claims.

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The Appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of the Invention.

The summary of the invention contained in the brief is correct.

(6) Issues.

The Appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims.

The Appellant's statement in the brief as to which claims stand or falls together is correct.

(8) Claims Appealed.

The copy of the appealed claims contained in the Appendix to the Brief is correct.

(9) Prior Art of Record.

<u>PATENT NUMBER</u>	<u>INVENTOR</u>	<u>PATENT DATE</u>
6,260,004	Hays et al.	10 July 2001
5,566,092	Wang et al.	15 October 1996
5,940,272	Emori <i>et al.</i>	17 August 1999
4,840,222	Lakin et al.	20 June 1989

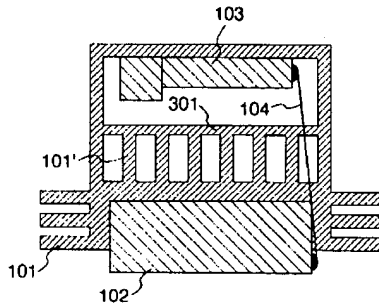
(11) Grounds of Rejection.

The following ground(s) of rejection are applicable to the appealed claims.

Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hays *et al.* (6,260,004) or Wang *et al.* (5,566,092), either in view of Emori *et al.* and Lakin *et al.*

As to claims 1-6, 9-11, 13-16, 18, 23 and 24, said claims are directed towards a machine with a container mounted outside the machine which receives operation data from the machine with a heat dissipation device between the container and the outside of the machine. Hays et al. discloses in col. 7 lines 16+ that industrial equipment should be remotely monitored *in situ* and

that such monitoring should be accomplished with network communications. Wang *et al.* discloses the monitoring of industrial equipment. To the left is an inverted image of figure 8 from Emori *et al.* Item [102] is a high heat generating device, item [103] is electronics which should be heat insulated yet electrically connected to item [102] while encased within electrical shielding.



Items [101] and [101'] are heat dissipating fins. Emori *et al.* does not specify that the heat generation device is a dynamoelectric machine. Lakin discloses in col. 1 lines 16+ that a dynamoelectric machine generates heat which is known to be harmful to associated electronics and that such electronics require heat insulation from high heat generating sources.

Neither Wang *et al.* nor Hays *et al.* specify that the monitoring electronics should be mounted upon the industrial equipment. The Examiner notes that it is well known to make integral that which was separate, In re Larson, 144 USPQ 347 (CCPA 1965), "Although it is true that invention may be present under some circumstances in making integral that which was separate before, we do not feel that such is the case here. Improved results only will not take the case out of the general rule. There is also a requirement that the unification or integration involves more than mere mechanical skill. In re Murray, 19 CCPA (Patents) 739, 53 F.2d 541, 11 USPQ 155; In re Zabel et al., 38 CCPA (Patents) 832, 186 F.2d 735, 88 USPQ 367." Because the devices of Hays *et al.*, Wang *et al.* and Lakin *et al.* are within the art of machine monitoring, because the device of Emori *et al.* is within the general art of electronics mounting, because it is known to monitor the operation of a rotating machine, because it is known that dynamoelectric machines generate heat which is harmful to electronics, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify either of Hays *et al.* or Wang *et al.* to include the mounting of the monitoring electronics within an arrangement as suggested by Emori *et al.*, with the monitoring electronics within a separate container while being attached to the device to be monitored, so as to receive the expected benefits derived therefrom such as increased heat insulation and increased resistance to EMF interference from the dynamoelectric machine.

As to claim 7, said claim is directed towards the use of curved fins. Because curved fins

are known generally within the art of device cooling, because Emori *et al.* does not preclude the use of such curved fins and because the applicant fails to claim criticality to such a curved fin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include curved fins within the modification of either Hays *et al.* or Wang *et al.* to include device of Emori *et al.* as modified above as a mere obvious design choice absent a showing of unexpected results or synergistic effect by applicant. This rejection motivation is not merely a statement that it would be obvious to try using curved fins, the Examiner position is rather that given that such curved fins are known in general within the heat dissipation art, that the use of such known curved fins would be obvious **to do**. In re Clinton, 188 USPQ 365 (CCPA 1976). In the instant case such motivation is inherent within the real world construction of industrial equipment, having to ensure clearance between fins and inherently required and disclosed wiring and mounting points.

As to claim 8, said claim is directed towards the use of fins of differing widths. Because fins of differing widths are known generally within the art of device cooling, because Emori *et al.* does not preclude the use of such different width fins and because the applicant fails to claim criticality to such different width fins, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include different width fins within the modification of either Hays *et al.* or Wang *et al.* to include the device of Emori *et al.* as modified above as a mere obvious design choice absent a showing of unexpected results or synergistic effect by applicant. This rejection motivation is not merely a statement that it would be obvious to try using differing width fins, the Examiner position is rather that given that such differing width fins are known in general within the heat dissipation art, that the use of such known differing width fins would be obvious **to do**. In re Clinton, 188 USPQ 365 (CCPA 1976). In the instant case such motivation is inherent within the real world construction of industrial equipment, having to balance the inherent and disclosed need for cooling air flow and the inherent heat flow limitations of fins of different widths.

As to claim 12, said claim is directed towards the use of fins of differing materials. Because fins of differing materials are known generally within the art of device cooling, because Emori *et al.* does not preclude the use of such different fin materials and because the applicant

fails to claim criticality to such different fin materials, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include different fin materials within the modification of either Hays *et al.* or Wang *et al.* to include the device of Emori *et al.* as modified above as a mere obvious design choice absent a showing of unexpected results or synergistic effect by applicant. This rejection motivation is not merely a statement that it would be obvious to try using differing fin materials, the Examiner position is rather that given that such differing fin materials are known in general within the heat dissipation art, that the use of such known differing fin materials would be obvious **to do**. In re Clinton, 188 USPQ 365 (CCPA 1976). In the instant case such motivation is inherent within the real world construction of industrial equipment, having to balance the inherent and disclosed need for cooling air flow and the inherent heat flow limitations of fin construction materials.

As to claim 17, said claim is directed towards the use of fins of differing lengths. Emori *et al.* discloses cooling fins of differing lengths in fig. 1. Because fins of differing lengths are known generally within the art of device cooling, because it is known generally within the cooling art that heat dissipating fins should be sized so as to prevent inadvertent contact with surfaces, because Emori *et al.* does not preclude the use of such different fin lengths, and because the applicant fails to claim criticality to such different fin lengths, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include different fin lengths within the modification of either Hays *et al.* or Wang *et al.* to include the device of Emori *et al.* as modified above so as to avoid inadvertent contact with a curved surface or as a mere obvious design choice absent a showing of unexpected results or synergistic effect by applicant. This rejection motivation is not merely a statement that it would be obvious to try using fins of differing lengths, the Examiner position is rather that given that such fins of differing lengths are known in general within the heat dissipation art, that the use of such known fins of differing lengths would be obvious **to do**. In re Clinton, 188 USPQ 365 (CCPA 1976). In the instant case such motivation is inherent within the real world construction of industrial equipment, having to ensure clearance between fins and inherently required and disclosed wiring and mounting points or other required motor surfaces.

As to claims 19-22, said claims are directed towards the use of a fin cooling fan. Emori *et*

al. discloses a fan in column 3, line 4, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within the modification of either Hays *et al.* or Wang *et al.* the fan of Emori *et al.* so as to receive the obvious benefits derived there from such as improved electrical component reliability.

As to claim 25, said claim is directed towards the use of a network backbone. Hays *et al.* disclose such a network backbone in col. 8 lines 32+. Wang *et al.* discloses real-time (col. 8 lines 34+) remote monitoring. The use of a network backbone to accomplish this is deemed required and therefore inherent within the teaching of Wang *et al.*

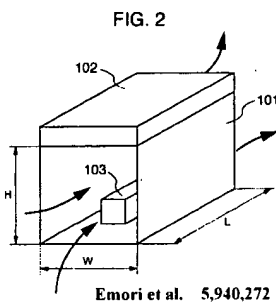
(12) Response to Argument.

With respect to Applicant's arguments starting at the bottom of page 4 through page 5, Applicant argues that there is no motivation found in the prior art to mount monitoring equipment upon industrial equipment. The Examiner notes In re Winslow, 53 CCPA 1574, 1578, 365 F.2d 1017, 1020, 151 USPQ 48, 50-51 (1966). All that is required to show obviousness is that the applicant, "*make his claimed invention merely by applying knowledge clearly present in the prior art. Section 103 requires us to presume full knowledge by the inventor of the prior art in the field of his endeavor.*" Appellant has disregarded the detailed process of thought found within the rejection which results in the Appellant's claimed subject matter and has created a fictitious rejection of hindsight which is not found within the record. Appellant has failed to argue the presented rejections as presented and has attacked the rejection as being made in hindsight. Such is clearly not the case. The Examiner has presented rationale and evidence to show that any differences in form between the claimed subject matter and the applied prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. In re Sheckler, 168 USPQ 716 (CCPA 1971), In re McLaughlin, 170 USPQ 209 (CCPA 1971). Furthermore, Appellant has attacked the presented rejection piecemeal rather than to face the combined force of Examiner's arguments and evidence, such is not appropriate, "...one cannot show non-obviousness by attacking references individually where, as here the rejections are based on combinations of references." In re Keller,

208 USPQ 871 (CCPA 1981).

More particularly with respect to Appellant's argument at the middle of page 5. Appellant argues that the applied art does not "*regulate heat flow*". This argument must fail because no such regulation is found within the claims. Regulation is defined by the Webster's Ninth New Collegiate Dictionary as, "*1a: to govern or direct according to rule... 3: to fix or adjust...*" Reducing heat flow rates is not governing or adjusting as such would be understood by one of ordinary skill in the art. The remainder of Appellant's arguments in this section are directed towards reducing heat flow. This function is performed inherently within the construction of the prior art and the Examiner needs not show that the prior art performs this function for the same reason as Appellant. "*However, the mere fact that the references relied on by the Patent and Trademark Office fail to evince an appreciation of the problem identified and solved by Appellants is not, standing alone, conclusive evidence of the nonobviousness of the claimed subject matter. The references may suggest doing, what an appellant has done even though workers in the art were ignorant of the existence of the problem.*" In re Gershon, 152 USPQ 602 (CCPA 1967).

With respect to Applicant's arguments starting at the bottom of page 5, Applicant argues that the prior art, "...can in fact direct heat from the dynamoelectric machine *into* the module, as



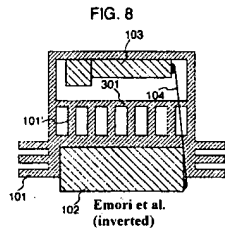
opposed to away from the module..." This is not supported by the facts.

Figure 2 of Emori *et al.* (shown on the left) clearly shows air flow transporting heat away from the associated electronics. Furthermore, Lakin *et al.* discloses in col. 1 that it is expected that the heat be transferred away from the electronics by artificial air flow. Certainly these teachings along with the combined knowledge within the art would not result in the piecemeal construct as suggested by Appellant.

With respect to Appellant's arguments starting at the top of page 6 concerning lack of motivation. Such motivation is explicitly cited within the rejections, "...so as to receive the expected benefits derived therefrom such as increased heat insulation and increased resistance to EMF interference from the dynamoelectric machine."

With respect to Appellant's arguments starting at the bottom of page 6, Appellant alleges

that the prior art applied fails to dissipate heat and provide thermal insulation. The Examiner

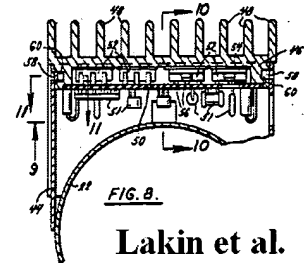


makes note of figure 8 of Emori *et al.* (inverted for the sake of clarity). The fins 101' clearly dissipate heat and the supporting walls clearly perform the function of insulating the associated electronics [103] from the heat source [102]. To the right is included figure 8 of Lakin et al. Clearly the

fins [48] dissipate heat away from the associated

electronics and the conduit box walls [44] clearly perform the function of insulating the associated electronics from the heat source. These functions are performed inherently within the construction of the prior

art and the Examiner needs not show that the prior art performs this function for the same reason as appreciated by Appellant. *"However, the mere fact that the references relied on by the Patent and Trademark Office fail to evince an appreciation of the problem identified and solved by Appellants is not, standing alone, conclusive evidence of the nonobviousness of the claimed subject matter. The references may suggest doing, what an appellant has done even though workers in the art were ignorant of the existence of the problem."* In re Gershon, 152 USPQ 602 (CCPA 1967).



Conclusion

In Summary, the instant invention is directed towards the obvious modification of known monitoring systems, thus it is believed that the rejections should be sustained.

CSM

Respectfully Submitted

Marc Hoff

Conferees

Marc Hoff
Georgia Epps

MSH
Kyzgys

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800